

CLAIMS

1. A temporary closure device for a throughway comprising a sleeve to fit in the throughway and a  
5 core located in the sleeve, the core having an annular rupturable connection locating the core in the sleeve to prevent flow of fluids through the sleeve, the annular connection being rupturable by displacing the core axially in the sleeve to allow fluid to flow  
10 through the sleeve.

2. A closure device as claimed in claim 1, wherein the annular rupturable connection is formed by an annular web extending between the core and the  
15 sleeve.

3. A closure device as claimed in claim 2, wherein the web is formed integrally with the core and has a rupturable connection with the sleeve.  
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4. A closure device as claimed in claim 3, wherein the annular web is formed integrally with both the core and the sleeve, the connection between the web and the sleeve being rupturable to permit the core  
25 to move axially in the sleeve to allow flow through the sleeve.

5. A closure device as claimed in claim 3, wherein the annular web is bonded to the sleeve and  
30 the bond being rupturable to permit the core to move axially in the sleeve to allow flow through the sleeve.

6. A closure device as claimed in claim 3, wherein the throughway in the sleeve has annular  
35 abutment means with which the web engages to locate the core in the sleeve and from which the web can be

disengaged by pressing the core into the throughway to allow flow of fluid along the throughway.

5           7.    A closure device as claimed in claim 1, wherein the sleeve is an elongate sleeve having a front portion in which the core is located and a rear portion to which the core may be displaced to allow flow of fluid through the sleeve.

10           8.    A closure device as claimed in claim 7, wherein the rear portion of the sleeve is formed with one or more axially extending slots in the wall of the sleeve through which fluid may flow when the core is located in the rear of the sleeve.

15           9.    A closure device as claimed in claim 8, wherein a plurality of slots are formed in the rear portion of the sleeve equispaced around the sleeve.

20           10.   A closure device as claimed in claim 7, wherein the core as moulded in the front portion of the sleeve and has an end projecting from the front end of the sleeve with which a tube or other component can act to displace the core into the sleeve to open  
25           the passage through the sleeve.

            11.   A closure device as claimed in claim 10, wherein the projecting end of the core tapers from the integral annular web to the front of the core.

30           12.   A closure device as claimed in claim 10, wherein the front of the core has an integral projecting cruciform shape to receive a tube or other component to displace the core.

35           13.   A closure device as claimed in claim 1, wherein the sleeve and core are moulded plastics

components.

14. A tube coupling comprising a coupling body having a throughway open at one end to receive a tube, a locking device in the throughway to engage and secure the tube in the throughway, a seal in the throughway beyond the locking device to engage and seal with the tube when the latter is fully inserted into the throughway and is engaged by the locking device and a closure device located in the throughway beyond the seal to be engaged by the tube as the latter is inserted into the throughway, the closure device incorporating a rupturable seal arranged to be ruptured by full insertion of the tube or pin to permit flow in the throughway.

15. A tube coupling as claimed in claim 14, wherein the closure device comprises a sleeve to be engaged in the throughway, a core located in the sleeve with a rupturable seal extending between the plug and sleeve, the plug being engaged by a tube or pin inserted into the throughway to rupture the seal with the sleeve and displace the plug along the sleeve to allow flow through the sleeve.

16. A tube coupling as claimed in claim 15, wherein the closure device comprises a sleeve and a core located in the sleeve, the sleeve having a front portion and a rear portion, the plug being located in and supported in the front portion of the sleeve by a thin breakable annular web formed integrally between the core and sleeve to prevent flow of fluids through the sleeve, the core being possibly displaceable into the rear portion of the sleeve and the rear portion of the sleeve having a passage or passages therein to permit flow of fluid passed the core when located in the rear portion.

17. A tube coupling as claimed in claim 16,  
wherein the rear portion of the sleeve is formed with  
one or more axially extending slots in the wall of the  
sleeve through which fluid may flow when the core is  
5 located in the rear of the sleeve.

18. A tube coupling as claimed in claim 17,  
wherein a plurality of slots are formed in the rear  
portion of the sleeve equispaced around the sleeve.  
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19. A tube coupling as claimed in claim 16,  
wherein the core is moulded in the front portion of  
the sleeve and has an end projecting from the front  
end of the sleeve on which a tube or other component  
15 can act to displace the core into the sleeve to open  
the passage through the sleeve.

20. A tube coupling as claimed in claim 19,  
wherein the projecting end of the core tapers from the  
integral annular web to the front of the core.  
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21. A tube coupling as claimed in claim 20,  
wherein the front of the core has an integral  
projecting cruciform shape to receive a tube or other  
25 component to displace the core.